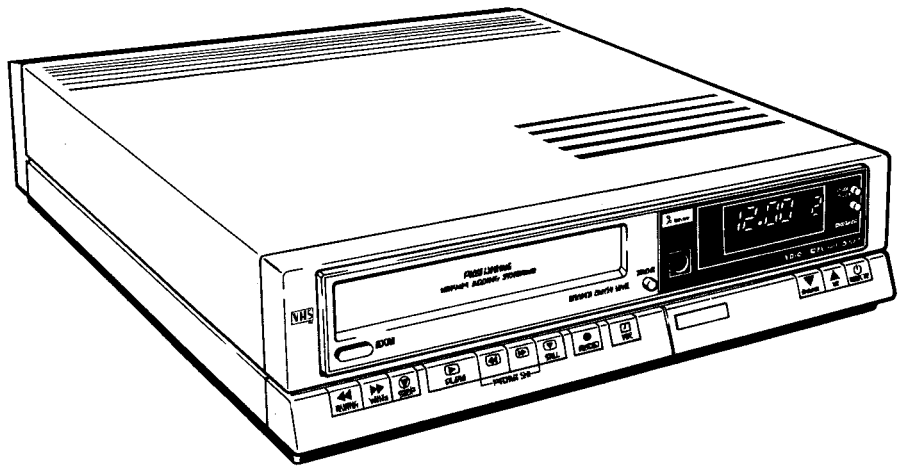
CONSUMER ELECTRONICS

PHILIPS

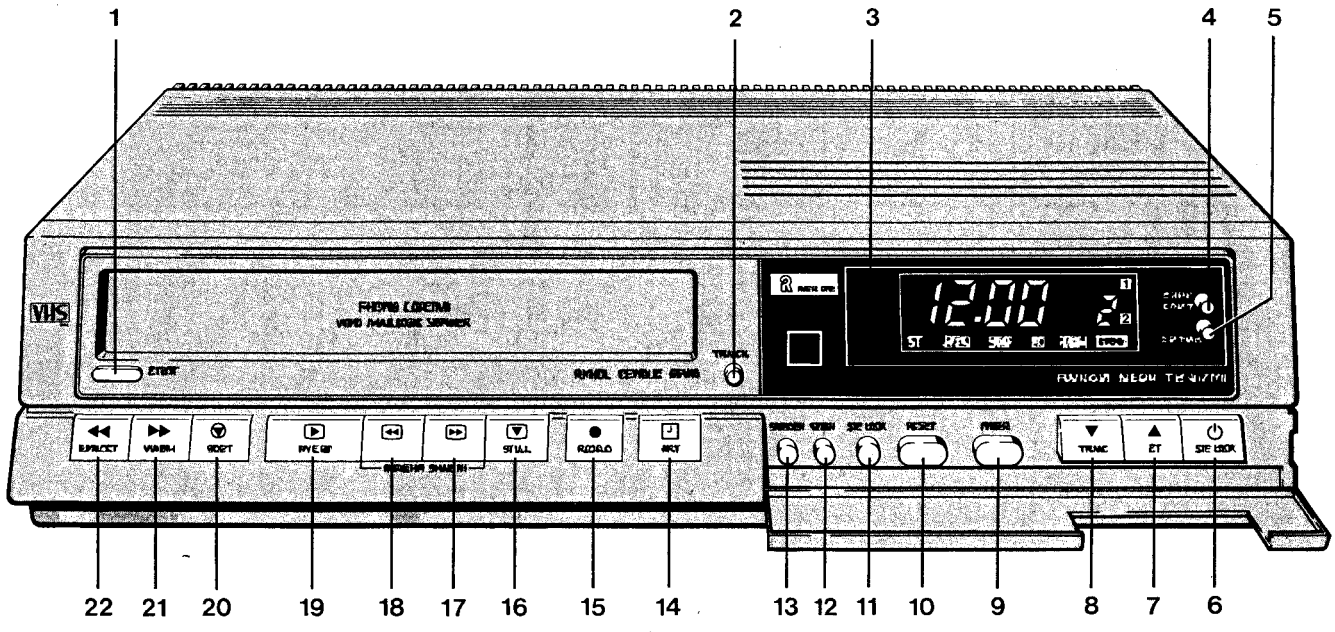


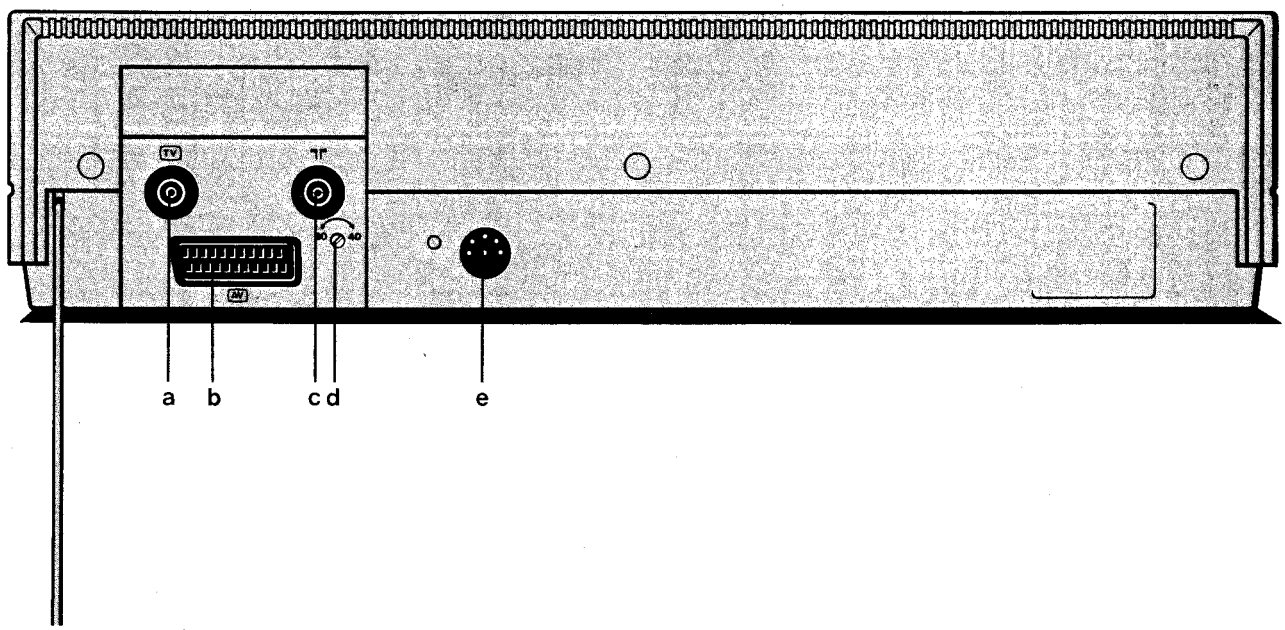
VHS

PAL

VR6463

VIDEO RECORDER


1
2
3
4
5
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6


a
b
c
d
e

CONTENTS

OPERATING INSTRUCTIONS

Page 1	About your video recorder
Page 1	Preparing the video recorder for use
Page 2 & 3	Setting up the video recorder
Page 3 & 4	Recording a TV programme
Page 4	Playing back a recorded tape
Page 5	Timed recording of TV programmes
Page 6	Remote control
Page 6	Recording with a camera
Page 7	Getting the best from your video recorder
Page 8	Before you call the repair man ...
Page 9	Technical data

Turn back this page and keep it open.
The instructions will refer to the controls and displays by the numbers shown on the diagrams overleaf.

DISPLAYS AND CONTROLS

1. **EJECT** – Pressing this button ejects the cassette.

2. **TRACKING** – Improves picture quality if distorted.

3. **DISPLAY** – This panel displays either the time or the tape position, the TV station to which the recorder is currently tuned, and indicates when a recording is in progress, or unable to proceed for some reason.

4. **CLOCK/COUNTER** – Switches the display from showing the time to showing the tape position, and back again to time.

5. **BRIGHTNESS** – Adjusts the brightness of the display.

6. **STANDBY** – Will halt any operation, and return the recorder to a state of readiness to record either from the timer, or by manual control. Also used to cancel timed recording settings when no longer required.

7, 8. **– UP & DOWN** – Used when setting clock or programme indicators on the display. Up will increase, and Down will decrease the displayed figure.

9. **TIMER** – Pressing this button begins the setting or cancelling of a timed recording. It is then used to proceed from one stage of the operation to the next.

10. **RESET** – When setting the clock to the correct time, or for a timed recording, this button sets it to '12.00', which may be a short cut to the required setting. When the display is showing tape position, RESET will return it to '0'. The button is also used to clear a timed recording block no longer required.

11. **SET CLOCK** – Begins setting the clock to the correct time of a day.

12. **STORE** – Used during the initial setting-up, to allocate numbers to the various TV channels.

13. **SEARCH** – During initial setting-up, instructs the recorder to search the airwaves for the TV stations with the best available reception.

14. **ITR** – Instantly begins recording of the TV channel currently indicated on the display. Simultaneously sets length of recording in multiples of 30 minutes.

15. **RECORD** – Begins recording of the TV channel currently indicated on the display. UP or DOWN will change the channel to the station required.

16. **STILL** – During playback of a tape, 'freezes' the action. Repeated pressing will advance the picture in stages to allow you to search for a particular 'frame' or to study the action of, for example, a sports scene.

17, 18. **PICTURE SEARCH** – FORWARD and BACK – During playback of a tape, shows the picture at high speed, to enable you to find a particular recording or scene. The sound is muted during this operation.

19. **PLAY** – Begins playing back a recorded tape.

20. **STOP** – During playback or recording, stops the tape.

21, 22. **WIND, REWIND** – Without showing a picture, winds or rewinds the tape at high speed. Used in conjunction with the tape position display to find a particular recording, or to rewind after recording ready for playback.

A. TV Socket

B. AV Socket (Euro connector)

C. Aerial Socket

D. 30-40 Control

E. Camera Trigger Socket

ABOUT YOUR VIDEO RECORDER

Congratulations on your new video recorder. It will give you many hours of enjoyment, whether you use it for playing back pre-recorded tapes of your favourite films, or for recording TV programmes which you would otherwise have missed. Alternatively, you may find it an invaluable business aid.

You can't wait to get it working, but before you do, spare a few moments to read this brief introduction to the world of video recording. It may repay you handsomely in terms of improved results, or avoidance of costly mistakes.

What is a video recorder?
Simply, it is a machine which stores pictures and sound on magnetic tape, just as a tape recorder stores sound. Unlike tape recorders, most of which use the familiar Compact Cassette, there are different kinds of video recorder, each with its own way of doing things, and each with is own kind of tape cassette. Among the different types of recorder are VHS, Betamax, U-matic, and V2000. Suffice to say that a tape from one kind of recorder cannot be used on a different type, so pay particular attention to the section of these instructions which deals with cassettes, and ensure that you only buy VHS tapes of the best quality that you can afford to get the best results from this recorder. The video recorder is a television receiver in its own right. When you record a programme coming in over the air, it is being received by the video recorder, not by your television set. This means that you can record one programme while you watch another or record a programme with the TV switched off.

Your video recorder has two deadly enemies – other electrical machines, and condensation. Read the instructions for installation carefully, with special regard for the proximity of other electrical devices, and make sure that you never – either during installation or ever in the future – put a tape, still cold from your shopping basket or car, into the recorder without letting it stand in the room for at least two hours to acclimatise.

PREPARING THE VIDEO RECORDER FOR USE

The dealer who supplied your video recorder may set it up for you. If he does not, don't worry; you can do it yourself quite easily. Simply follow these step-by-step instructions, and you will be watching your pre-recorded tapes, or recording TV programmes off the air, in no time.

Unpack the video recorder from its box, and stand it in the room where it is going to be used. Particularly in cold weather, when it may have been stored in a cold warehouse or store-room, it must stay there for at least two hours before you attempt to either play a tape, or make a recording. Failure to do this may result in damage to both machine and tapes, caused by condensation on cold surfaces. While the machine is acclimatising to the room, you can consider where it is to be situated and connect up the various leads to power and TV.

Positioning the video recorder
Do not place the video directly on top of, underneath or very close to any other piece of electrical equipment – including the TV set. Too close proximity can lead to electrical interference from the other device detracting from the quality of your recordings. Ensure that there is at least 20 cm, (8") between the video recorder and the TV set. Allow air to circulate freely through the ventilation slots at top and bottom of the video, by ensuring that there is at least 3 cm (1¼") of clear space around the machine.

Connecting up
Check the plate at the rear of the video recorder, to make sure that the voltage is the same as the mains supply – 240 V in the United Kingdom.

Fit a suitable mains power plug to the mains lead attached to the video recorder. This must be done as follows:

The blue wire in the mains lead must be connected to the Neutral terminal of the plug, which is marked 'N' or coloured black. The brown wire in the mains lead must be connected to the Live terminal of the plug, which is marked 'L' or coloured red.

If the mains plug (or adaptor) contains a fuse, this should have a value of 3A. Alternatively, if a non-fused plug is used, the fuse at the distribution board should not be greater than 5A.

Disconnect the aerial lead from the TV set, and connect it to the socket (c) at the rear of the video recorder.
Unpack the cable supplied with the machine, and connect it from the TV socket (a) on the video recorder to the aerial socket on your TV.

Before you start
The video recorder may be put into two different states of readiness once connected to the mains power supply. In fact the machine should remain plugged in, except for long periods of absence, and has been designed so that this may be done safely.

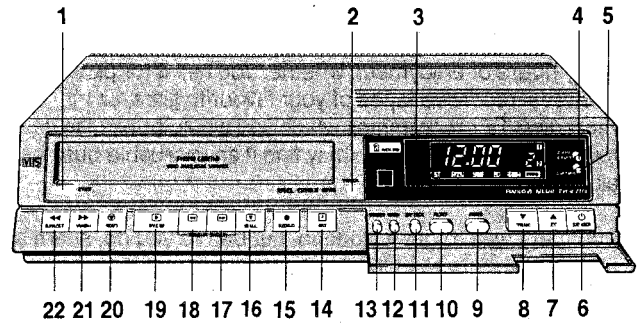
In 'Standby' mode the display will show only the time and the machine is 'off' except for the timer and control circuits.

To activate the video recorder, press any of the tape control keys (**14**) to (**22**) and the machine will immediately start the operation selected.

The display will now show the channel indicator and either the tape counter or 'CASS' depending on whether there is a cassette loaded or not. To return the machine to 'Standby' simply press Standby (**6**) again.

To conserve electricity and to increase the life of your video recorder, the machine will automatically return to 'Standby' after 8 minutes of inoperation.

SETTING UP THE VIDEO RECORDER



Setting the clock
Plug in and switch on the video recorder. The display will either show CASS – indicating that there is no cassette in the machine, or the time will flash. If the display shows CASS, press the CLOCK/COUNTER (**4**) button to the right of the display, to set the display to 'time'. Otherwise continue.

Now press 'SET CLOCK' (**11**) and the time will flash more rapidly. It is a 24-hour clock, so for example, 17.09 is nine minutes past five in the afternoon.

Using the UP or DOWN buttons (**7, 8**) the clock may now be set to the correct time. Holding down these keys will make the display change faster. The RESET (**10**) button will set the clock to 12.00, and this may be a useful short cut.

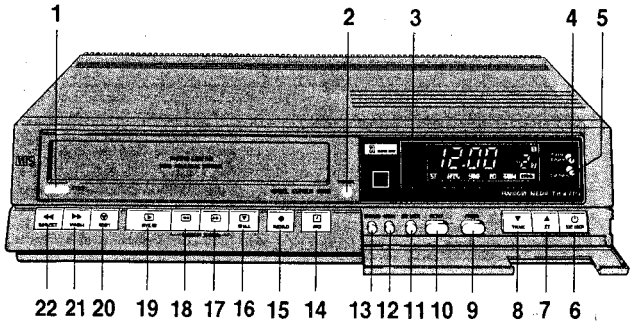
When the clock shows the correct time, press SET CLOCK (**11**) again. The figures will stop flashing and the clock will be set.

Tuning the TV set to the video recorder
Most TV sets have press-buttons which are pre-tuned to the TV stations. One of these buttons, or settings, has been reseved by the manufacturer of the TV as most suitable for a video recorder. Use of any other channel may cause distortion of the picture from a pre-recorded tape. The video channel varies from one make and type of TV to another. It may be identified as such on the channel tuners on the set, or it may be specified in the instruction manual for the TV. If neither is the case, try the channel with the highest number, as it is usually the right one. If you experience distortion of the picture – particularly if playing cassettes which were not recorded on your machine – try another channel, or consult your TV dealer or repairer for advice.

Switch on the TV set, select the video channel and, **without a cassette in the recorder**, press PLAY (**19**). If your TV is of the type which automatically searches for a programme, the pattern shown here should shortly appear on the TV ◧.
If your TV is manually tuned, move the selector for the video channel until this pattern appears on the screen. You will find that there are two positions of the tuner, quite close together, which will produce this display. You may need to experiment later by playing a recorded cassette to find which setting will give the better picture.

If your TV set indicates the numbers of the channels, you should find the video setting around channel 37 UHF. When tuning is complete, PRESS EJECT (**1**).

SETTING UP THE VIDEO RECORDER



Tuning the video recorder to the TV stations
To begin locating stations, switch on the TV, and select the video channel, so that the TV will show the station selected.

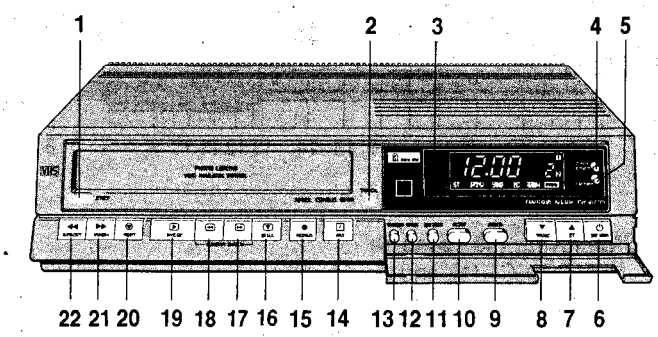
The video recorder has the ability to store up to 35 stations in its pre-selector memory. The recorder will search the airwaves and find the stations for you. As each station is located, you simply allocate a number to it. This is most sensibly the same number that you would sensibly the same number that you would use to tune your TV to that station. For example, 1 = BBC1, 2 = BBC2, 3 = ITV, 4 = Channel 4.

Press STANDBY (**6**) to ensure that the machine is in Standby mode.

Press SEARCH (**13**), and the recorder will begin to search the airwaves. When a station has been successfully located, the number (not neccessarily that channel's number) on the display will flash, indicating that searching has temporarily ceased, and the programme being transmitted will appear on the TV.

If a picture is too poor for satisfactory viewing or recording, this means that the station is too weak, or too distant to be received properly. In this case, press SEARCH (**13**), to continue searching without storing the station.
With a satisfactory picture, press the normal tuning buttons of your TV to discover which programme has been located. When you have identified the programme, use the UP (**7**), or DOWN (**8**), buttons to change the number on the video recorder display to the same as the channel selector for that programme on your TV (for example 1 = BBC 1; 2 = BBC 2 etc.).
Press STORE (**12**), and the station is stored under that number for future selection.
Reselect the video channel on your TV, press SEARCH (**13**) to continue, and repeat until all the available TV stations have been stored.
If you store a TV station under a number which has already been used for another station, the second station will replace the first, and the first station will no longer be stored.

RECORDING A TV PROGRAMME

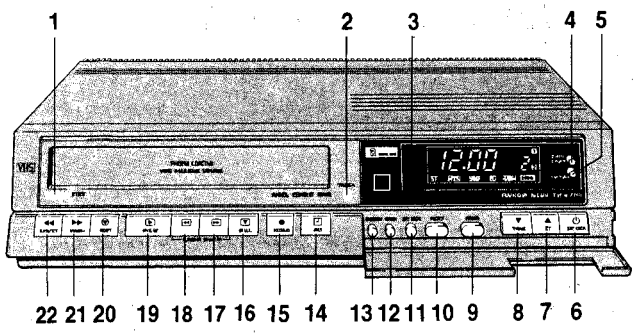


You can manually control the video recorder to record a programme while you are present, whether or not you are watching it. You can watch another programme, or the TV can be switched off.

Inserting a cassette
Press EJECT (**1**) to ensure that there is no cassette already in the machine.
Video cassettes can be used only on one side. With the window side upwards, and the title lable towards you, insert a new blank cassette into the slot in the front of the recorder, as far as it will go. When you let go, the cassette will be drawn into the machine.

Selecting the TV station to be recorded
The station which appears on the recorder display will be recorded, **irrespective of what is shown on the TV screen.**
Use the UP (**7**) or DOWN (**8**) button to change the number to that of the required station.
Press RECORD (**15**), and recording will begin. The word RECORD will appear below the programme selector number in the display.
To stop the recording when it has finished, or to avoid recording commercial breaks, press STOP (**20**). Pressing RECORD (**15**) again will recommence recording, with no visual break being apparent during playback.
If you record manually during the time set for a timed recording, the timed recording will be unable to proceed. You will however be warned by a block indicator commencing to flash at the time when the timed recording should start.

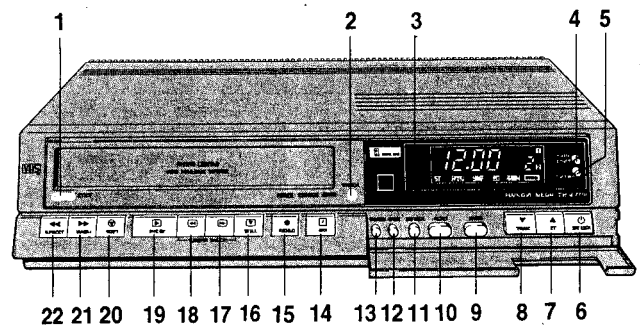
Instant Timer Recording (ITR)
This feature allows you to instantly start a recording, at the same time setting the length of time for which it is to run, in 30-minute steps. This may be used if, for example, you wish to record the remainder of a programme which you have been watching in order to go out, or to bed, or if your viewing is interrupted by unexpected visitors.
Ensure that the channel being received by the video recorder is the one you wish to record.
Press the ITR (**14**) button. The display will show the current time advanced by 30 minutes. This is the time at which the recording will stop. If the programme is likely to continue beyond this time, press ITR (**14**) again, and the time will advance by a further 30 minutes. This can be repeated up to the total capacity of the tape. If you go too far, pressing RESET (**10**) will return the setting to current time + 30 minutes.
To stop the recording before the time indicated, press STOP (**20**) or STANDBY (**6**).



Removing the cassette
Press EJECT (**1**), and the cassette will be ejected sufficiently for you to be able to remove it from the machine. See the section 'How to get the best from your video recorder' for correct methods of storing and handling tape cassettes.

Indexing your recordings
During recording, the tape position indicator will register the progress of the tape. The readings at the beginning and end of the recording should be noted on the index card in the cassette box. These can then be used to find a recording when you wish to replay it.

RECORDING A TV PROGRAMME



Re-using recorded tapes
Any tape may be re-used when the programmes recorded on it are no longer required. Simply record again over the original recording, which will be erased and replaced by the new recording.

Protecting recorded cassettes
To prevent re-use and erasure of „precious' cassettes containing recordings which you wish to keep indefinitely, remove the 'ERASE PREVENTION' tab on the rear edge of the cassette. Use a screwdriver or similar instrument to break the tab from the cassette. If you attempt to record again on this cassette, it will be automatically ejected from the machine.

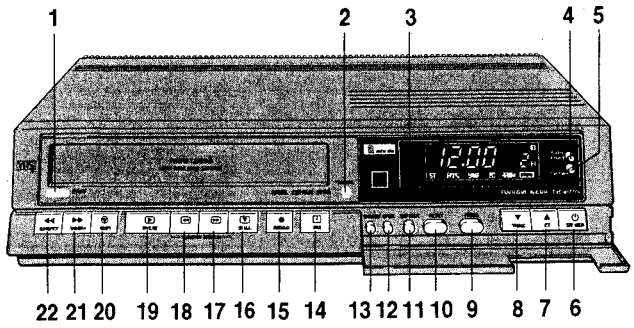
Un-protecting cassettes
If, after a period of time, you change your mind and whish to over-record a protected cassette, you can do this by covering the hole from which the tab was removed with adhesive tape. Care should be taken that the tape does not become detached, as it may damage the machine. Tapes should be inspected before use, and any partly-detached tape replaced before inserting into the video recorder.

NOTE: *Recording of programmes for other than private use may infringe copyright laws, Showing of recorded programmes in a public place, or to a paying audience may render the exhibitor liable for prosecution.*

PLAYING BACK A RECORDED TAPE

Playing back a recorded tape
Insert the tape cassette, select the video channel on the TV, and press PLAY (**19**) on the video recorder.
If the picture is distorted, press the TRACKING (**2**) button, and wait. The video recorder will then search for the best picture quality, which will then be maintained until the cassette is ejected. During the search, the sound will be muted.
The tape will automatically rewind when it reaches the end. After 8 minutes, the machine will return to STANDBY mode.

TIMED RECORDING OF TV PROGRAMMES



The video recorder may be set to record a programme, or programmes, up to 30 days in advance. You may record two separate programmes, controlled by two entirely independent 'blocks' of times, or you may record at the same time every day for 30 days, or you may combine the two – using one 'block' to record at the same time every day, while the other is set to catch a particular programme. The TV set need not be switched on, or even connected.

Setting a recording block

Press the TIMER (**9**) button. The indicator BL appears at the bottom left of the display.

A number, 1 or 2, will appear in the display above the timer button. This indicates a free block.

If a block is already programmed for a timed recording, this will also show as a square containing the number 1 or 2, to the right of the display. If both blocks are shown to be in use, the display above the timer button will show as '-'. In this case, proceed as in 'checking or changing recording blocks' if you wish to over-ride the existing setting.

Assuming that a block is free for use, press TIMER (**9**) again. The word START is displayed, below the start time which was set the last time the block was used.

Use the UP (**7**) and DOWN (**8**) buttons to reset to the time at which the recording is to begin.

Press TIMER (**9**) again. The word STOP appears, below the stop time set the last time the block was used. Use UP (**7**) and DOWN (**8**) to reset this to the time at which recording is to end.

Press TIMER (**9**) again. The word DAY appears, below the figure 0. This represents today. 1 is tomorrow, and so on up to 30 days hence. To repeat the recording at the set time every day, the day should be set to 00, by using the DOWN (**8**) button. For a programme starting at midnight, set the day number of the following day.

Using UP (**7**) or DOWN (**8**) set to the day required.

Press TIMER (**9**) again. The word PROG appears – short for programme. Again using UP (**7**) or DOWN (**8**), set this to the TV station which will transmit the programme to be recorded.

Press TIMER (**9**) again, and the block indicator for the block just programmed shows to the right of the display. This completes the programming of the block.

If you have mistakenly selected a PROG number which is not assigned to a TV station, the recorder will display '-' with PROG still showing. Use UP (**7**) or DOWN (**8**) to select an assigned number, then press TIMER (**9**) to complete the operation.

Ensure the machine is in Standby mode and that an unprotected cassette of sufficient length is loaded at the time the recording is due to take place. If only one block is set, the tape will automatically rewind on completion of the recording. If both blocks are set, the tape will rewind after the second block has recorded.

Timed recording will only take place if at the intended start time the video recorder is available for recording, that is, not already recording or playing a tape. In such a case, the block indicator will flash at the set start time. Pressing RECORD (**15**) will then override the manual operation, and the timed recording will begin.

Checking or changing recording blocks

To check the settings in a recording block, press TIMER (**9**). The number 1, 2, (or '-' if both blocks are used) of a block will appear as it does at the beginning of the initial setting sequence. Press UP (**7**), or DOWN (**8**), to change if necessary to the number of the block required.

Press TIMER (**9**) again, and START appears, with the start time which is set. Use UP (**7**) or DOWN (**8**) to change this if required. If no change is required continue below.

Press TIMER (**9**) again, and STOP appears. Change as before if required; similarly with DAY number and PROGramme, as before.

Press TIMER (**9**) again, and the new settings will be stored in the block specified.

To clear a block

If you change your mind, and decide that a timed recording is not after all required, you can clear the block, and cancel the recording.

Press TIMER (**9**), and use UP (**7**) or DOWN (**8**) to display the number of the block to be cleared.

Press RESET (**10**). The block indicator to the right of the display will disappear, and the block will be cleared.

To cancel a timed recording which is already in progress, press STANDBY (**6**). The recording will cease, and the block will be cleared.

REMOTE CONTROL

Remote control of the video recorder

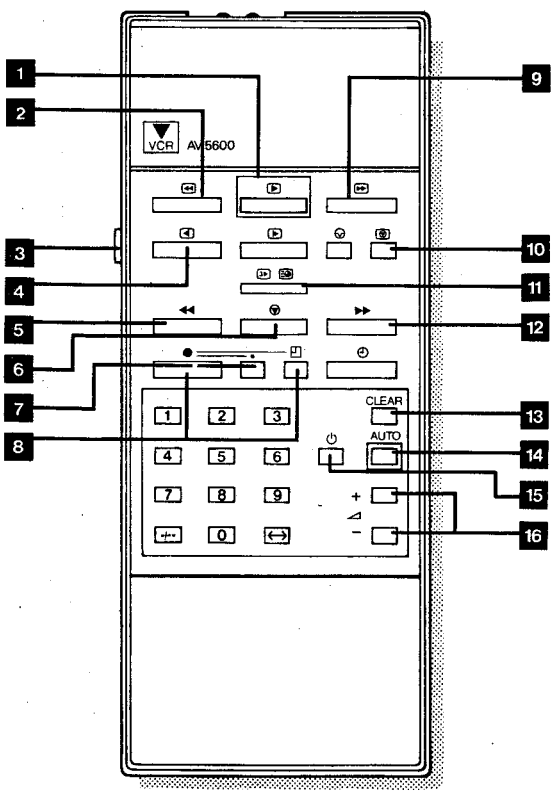
If you have a remote-control unit with your video recorder, you will find that you can control all the record and playback features from the comfort of your armchair, or from a rostrum or speaker's chair if you are using the video for training or presentation purposes.

You will also find that you have an additional feature – not accessible through the controls of the video recorder – of normal-speed reverse play, with the sound muted.

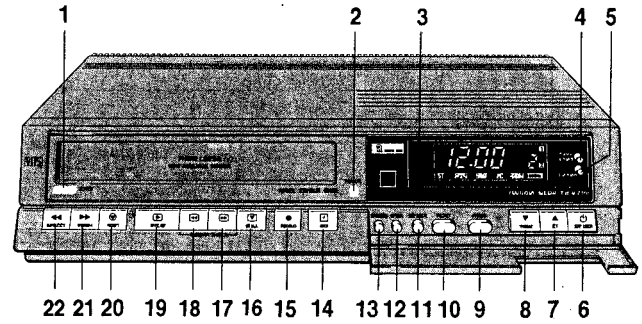
The remote-control handsets are designed to work with a range of products. Dependent upon the handset used, not all features for which controls exist on the handset will necessarily be available on this recorder.

The buttons relevant to this recorder are indicated on the diagram below, which shows the remote-control handset AV 5600.

1 ▶ Play
2 ◀◀ Picture search reverse
3 Video TV mode
4 ◀ Play reverse
5 ◀◀ Rewind
6 ▼ Stop
7 ● • Record (press both buttons simultaneously
8 ● ⊡ ITR (press these buttons simultaneously, but press ITR once for ½ hour, etc. up to 4 hours)
9 ▶▶ Picture search forward
10 ⏸ Still frame
11 ▶ Fast motion
12 ▶▶ Wind
13 CLEAR Clear
14 AUTO Auto tracking
15 ⏻ Standby
16 ◿ Volume (should be pressed together with Video TV mode button)



RECORDING WITH A CAMERA



You can use your video recorder to make your own video recordings, either to capture memorable occasions at home, or as a business tool to record sales demonstrations, training sessions, or pep talks to personnel in remote locations.

There is a range of cameras available, some specifically recommended to work with this particular recorder. Your supplier will be pleased to advise you, or you can write to the address on the back cover of these instructions.

Detailed instructions for using the camera will be packed with the camera itself, and there are a number of useful books published, dealing with the making of home videos, or videos for business use. The instructions given here cover only connecting the camera to the video recorder, and starting and stopping recording.

For maximum mobility during recording, you will need a long lead from the camera. A cable drum, AV 5003, is available, complete with 20m of cable.

A cable connects the DIN plug marked VCR on the cable drum of the AV connector (b) at the rear of the video recorder.

Another cable connects the remote-control socket on the cable drum to the trigger socket (e) to the right of the AV connector on the video recorder.

The mains cable must be connected by a suitable plug as described for the video recorder in the section 'Connecting up'.

The camera connects to the female 10-pin connector on the end of the 20m cable.

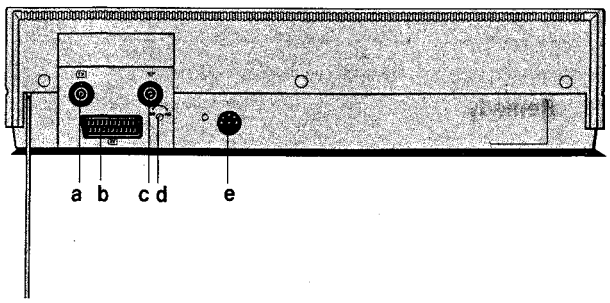
To record from the camera, load an unprotected cassette into the video recorder.

Press DOWN (**8**) to select channel 0 on the video recorder.

Press the camera trigger. For continuous recording from a fixed camera, you can also start recording by pressing the RECORD (**15**) button on the video recorder.

To stop recording, release the trigger, or use the STOP (**20**) button if you are controlling the camera from the recorder.

GETTING THE BEST FROM YOUR VIDEO RECORDER



You should by now be able to use your video recorder for recording programmes off the air, whether you are there at the time or not; for playing back your own or commercially-produced video recordings, for making your own recordings with a video camera if you are fortunate enough to have one. Here are a few additional tips to help you to get the best possible use from your video recorder, or to operate it under adverse conditions, such as in a weak reception area.

Interference during playback
In some parts of the UK, there may be interference from TV stations broadcasting around channel 37 UHF, which is where your TV is tuned to the video recorder.
If this should happen, use a small screwdriver to turn the 30-40 control (d) at the rear of the video recorder by a quarter of a turn, then retune the TV. If this does not succeed completely, try another quarter-turn and retune. Repeat as necessary until the picture is clear.

Connecting your TV via the AV connector
If your TV set has an AV (audio-visual) socket, you may find that you can improve the quality of picture during playback by connecting this socket to the AV socket (b) on the Video recorder. See the 'Instructions for Use' for your TV set for the location of such a socket, and how to select AV mode. Your TV dealer will supply you with a suitable cable for the purpose.

Storing video cassettes
When not in use, cassettes should be stored vertically, in their cases, at room temperature. They should be protected from dust, extreme humidity and bright sunlight, and kept away from electrical devices likely to contain loudspeakers, motors or magnets – in short, **not** on top of the TV or Hi-fi, or where the vacuum cleaner is likely to pass to close.
Always rewind a cassette before storing – never store a half-wound tape.
Never touch the tape itself, and on no account attempt to dismantle a cassette. These are precision-made, and can be irreparably damaged by unskilled hands.

BEFORE YOU CALL THE REPAIRMAN . . .

Here are some useful checks to make if things go wrong, before calling out an engineer – unnecessary calls can be expensive, as well as frustrating.

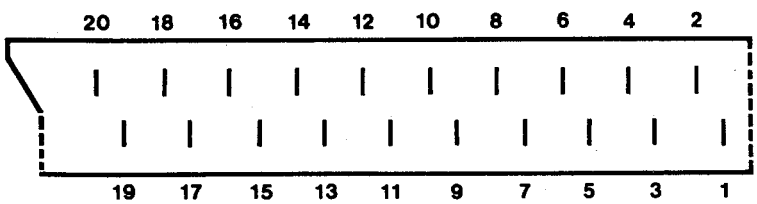
Problem and possible cause	**Remedy**
Will not record or play back (Clock not displayed). Mains failure, or video recorder not connected.	Check fuse, reconnect recorder. Try another appliance in the mains socket.
(Clock displayed) Cassette at end of tape.	Rewind tape.
Does not respond to any controls. Mains or aerial-borne disturbance has 'upset' the microprocessor which controls the recorder.	Switch off at mains for a few seconds. Switch on, reset clock, and continue as normal.
Cassette ejects when loaded. Cassette protected from recording.	Use an unprotected cassette, or unprotect with adhesive tape.
Clock flashes slowly. There has been a power failure, or the recorder has been disconnected.	Reset clock.
Clock flashes quickly. The SET CLOCK button has been pressed.	Check time, and reset if necessary.
Poor quality recording. a Loose aerial lead. b Cassette incorrectly stored. c Poor quality cassette. d Weak transmitter signal.	a Reconnect correctly. b Use another cassette. c Use another cassette. d See your dealer – he may be able to improve reception.
Timer block indicator flashes. a A timed recording cannot proceed because you are recording or playing back a tape. b You have forgotten to load a cassette	a Press RECORD to make the timed recording, or clear the block if it is no longer needed. b Load cassette, and press RECORD.
Cassette is ejected when trying to record. a Cassette is protected or b Cassette is at end of tape.	a Insert an unprotected cassette. b Rewind or insert new cassette.
ITR or TIMER will not respond (Clock flashing) There has been a mains failure or disconnection	Reset clock to correct time and retry.
Cannot load a cassette Cassette already loaded or Cassette carrier wrongly positioned.	Press EJECT to remove cassette or correct carrier position, then reload.

TECHNICAL DATA

GENERAL	
Mains Voltage	240v (± 10%)
Mains Frequency	48 to 52 Hertz
Power Consumption	28W typical (10W typical in standby)
Wind/rewind time	5 min typical for E-240
Ambient Temperature	+ 10 to + 35°C
Humidity	30 to 80%RH
Dimensions	420x350x105 mm (DV464 = 330)
Weight	7 kg approx.
Position for use	max. 15° inclination from horizontal
Tuner	
35 stations + AV	
Preprogrammable blocks	2
No. of days in advance	30, or every day at same time for 30 days
VIDEO	
Input via Euroconnector plug	1 Vpp + 6 dB, -3 dB, 75 ohm
Output via Euroconnector plug	1 Vpp ± 1 dB, 75 ohm
Resolution	> 3.1 MHz (-26 dB)
Signal/noise ratio	typical 47 dB (CCIR recommendation 567 Part C (> 44 dB))
AUDIO	
Input via Euroconnector	500 mVrms
Output via Euroconnector	500 mVrms ± 6 dB, 1 kOhm
Signal/noise ratio	> 43 dB weighted (DIN 45500)
Wow and flutter	< 0,4% weighted (DIN 45507)
Harmonic distortion	< 6%
Audio frequency response	40 to 10 000 Hz within 8 dB

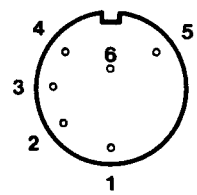
CONNECTORS

EUROCONNECTOR



pin 1 – Audio right, out
pin 2 – Audio right, in
pin 3 – Audio left, out
pin 4 – Audio ground
pin 6 – Audio left, in
pin 8 – Status CVBS
pin 17 – Video ground
pin 19 – CVBS out
pin 20 – CVBS in
pin 21 – Shielding

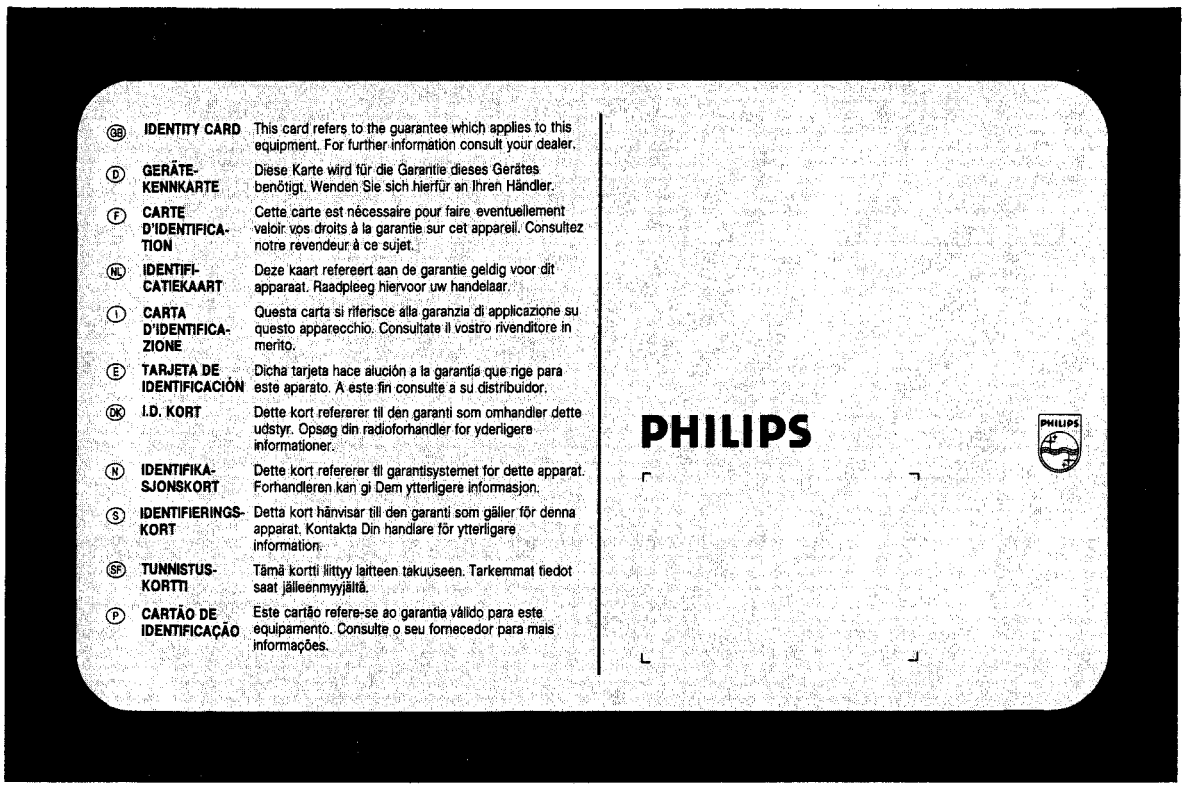
DIN CONNECTOR



pin 1 – I^2C clock
pin 2 – Ground
pin 3 – Not connected
pin 4 – Inverse trigger
pin 5 – I^2C data
pin 6 – Power supply 7.5 - 14.5 V, load max. 150 mA

This product complies with the Radio Interference requirements of the Council Directive (83/499 EEC). Data subject to change without notice.

COPYRIGHT
Recording and playback of material may require consent of copyright owner see Copyright Act 1956 and the Performer's Protection Acts 1958-1972.


GB IDENTITY CARD This card refers to the guarantee which applies to this equipment. For further information consult your dealer.
D GERÄTE-KENNKARTE Diese Karte wird für die Garantie dieses Gerätes benötigt. Wenden Sie sich hierfür an Ihren Händler.
F CARTE D'IDENTIFICATION Cette carte est nécessaire pour faire éventuellement valoir vos droits à la garantie sur cet appareil. Consultez notre revendeur à ce sujet.
NL IDENTIFICATIEKAART Deze kaart refereert aan de garantie geldig voor dit apparaat. Raadpleeg hiervoor uw handelaar.
I CARTA D'IDENTIFICAZIONE Questa carta si riferisce alla garanzia di applicazione su questo apparecchio. Consultate il vostro rivenditore in merito.
E TARJETA DE IDENTIFICACIÓN Dicha tarjeta hace alución a la garantía que rige para este aparato. A este fin consulte a su distribuidor.
DK I.D. KORT Dette kort refererer til den garanti som omhandler dette udstyr. Opsøg din radioforhandler for yderligere informationer.
N IDENTIFIKASJONSKORT Dette kort refererer til garantisystemet for dette apparat. Forhandleren kan gi Dem ytterligere informasjon.
S IDENTIFIERINGSKORT Detta kort hänvisar till den garanti som gäller för denna apparat. Kontakta Din handlare för ytterligare information.
SF TUNNISTUSKORTTI Tämä kortti liittyy laitteen takuuseen. Tarkemmat tiedot saat jälleenmyyjältä.
P CARTÃO DE IDENTIFICAÇÃO Este cartão refere-se ao garantia válido para este equipamento. Consulte o seu fornecedor para mais informações.
PHILIPS
PHILIPS

Philips Service Centres

SCOTLAND & NORTHERN IRELAND

GLASGOW SERVICE CENTRE
Quay Road North
Rutherglen, Glasgow G73 1TQ
Telephone: 041 647 9416
Telex 779418

NORTH WEST & HUMBERSIDE

MANCHESTER SERVICE CENTRE
Arco House, 12 Stocks Street
Manchester M8 8QG
Telephone 061 832 6071
Telex 668526

MIDLANDS

BIRMINGHAM SERVICE CENTRE
2219 Coventry Road
Sheldon
Birmingham B26 3EG
Telephone: 021 743 0441
Telex 337225

SOUTH WEST & SOUTH WALES

BRISTOL SERVICE CENTRE
51 Victoria Street
Bristol BS1 6AG
Telephone 0272 211144
Telex 44779

NORTH EAST

NEWCASTLE SERVICE CENTRE
93-105 Blenheim Street
Newcastle upon Tyne NE1 3PJ
Telephone 0632 320771
Telex 537556

LEEDS SERVICE CENTRE
Limewood Approach
Ring Road, Seacroft
Leeds, LS14 1ND
Telephone 0532 733611
Telex 557123

LONDON

SOUTH LONDON SERVICE CENTRE
604 Purley Way
Waddon Factory Estate
Croydon, Surrey CR9 4DR
Telephone 01 686 3300
Telex 8953759

SOUTH

SOUTHAMPTON SERVICE CENTRE
Millbrook Close
Chandlers Ford Ind. Estate
Eastleigh, Hants. SO5 2BZ
Telephone 04215 66644
Telex 477444

3122 125 85671